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78TH CONGRESS  
2d Session

SENATE

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REPORT NO. 3

U.S. Congress. Senate. Committee on education and *Health*

## WARTIME HEALTH AND EDUCATION

### INTERIM REPORT.

FROM THE

### SUBCOMMITTEE ON WARTIME HEALTH AND EDUCATION

TO THE

COMMITTEE ON EDUCATION AND LABOR  
UNITED STATES SENATE

PURSUANT TO

S. Res. 74

A RESOLUTION AUTHORIZING AN INVESTIGATION OF THE  
EDUCATIONAL AND PHYSICAL FITNESS OF THE  
CIVILIAN POPULATION AS RELATED  
TO NATIONAL DEFENSE

JANUARY 1945



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[Pursuant to S. Res. 74]

REPORT TO THE SENATE COMMITTEE ON EDUCATION AND LABOR FROM  
THE SUBCOMMITTEE ON WARTIME HEALTH AND EDUCATION

We have the honor to submit herewith the third interim report of the Subcommittee on Wartime Health and Education.

THE 4½ MILLION IV-F'S

The Nation has been deeply impressed by the fact that approximately 4½ million young men in the prime of life have been found unfit for military service because of physical and mental defects. In addition, more than a million men have been discharged from service because of defects other than those sustained in battle. One and one-half million men now in uniform were rendered fit for service only through medical and dental care given after they were inducted.

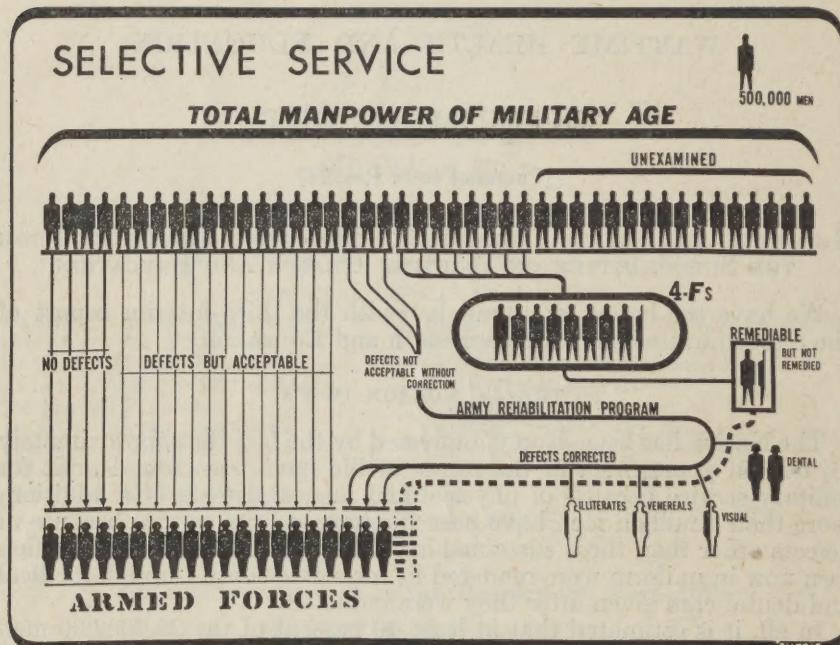
In all, it is estimated that at least 40 percent of the 22,000,000 men of military age—between 8 and 9 million men—are unfit for general military duty. This is more than twice the number of men we now have overseas engaged in the great offensives that will bring total victory.

The 4½ million men in class IV-F are those who remained unfit for military service after all doubtful cases had been reexamined in terms of the latest revision of Army and Navy physical and mental standards, after induction of those acceptable for rehabilitation in the Army and Navy, and after reclassification of all who by self-rehabilitation or other circumstances had become eligible for military duty. It should be emphasized that these 4½ million men are all rejectable under the lowest possible physical and mental standards, as defined by a special commission of physicians appointed by the President.

Interpretation of the Selective Service rejection data as an index of national health was challenged at the subcommittee's hearings by representatives of the American Medical Association. They pointed out that the standards of physical fitness demanded for military service are considerably higher than those required for normal civilian activity.

While it is true that many people are afflicted with defects that do not prevent participation in ordinary activities, such defects often reduce initiative and working capacity, and, if neglected, may eventually result in serious illness or disability. Minor defects of this kind

may not appreciably affect mortality and morbidity rates, or life expectancy tables. They may offer little of interest to physicians engrossed with more spectacular ills. But the patient with a toothache, or with impaired hearing, is well aware of the distress and limitations imposed upon him by his infirmity. In the aggregate, minor defects constitute a serious drain on our manpower.



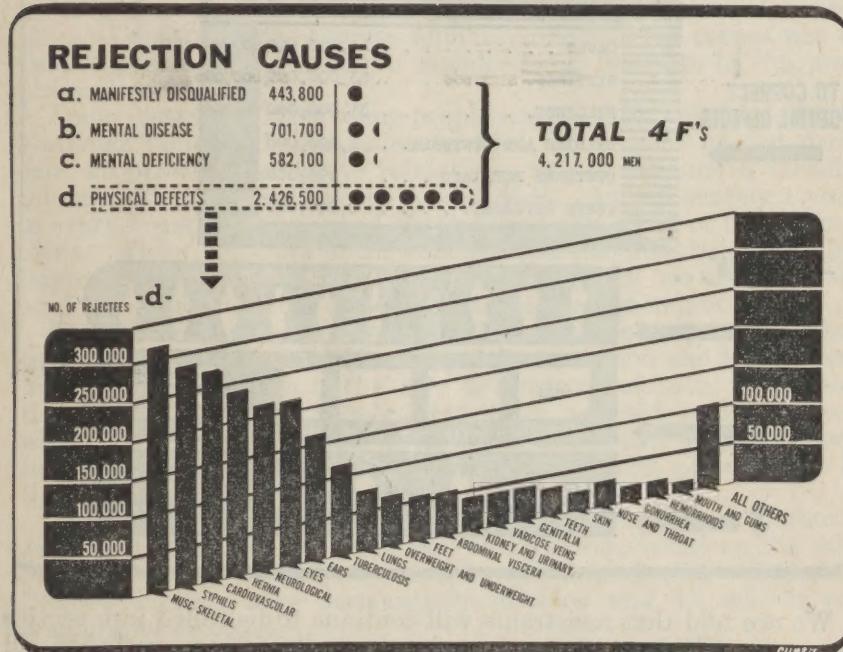
Regardless of how the Selective Service data are interpreted, the widespread existence of illness and defects among our population has been demonstrated by numerous extensive surveys conducted under both governmental and private auspices. The findings of some of these surveys, which also have shown that many of these diseases and defects are preventable or remediable with proper medical care, will be cited later in this report.

#### MEANING OF THE FIGURES

It would be wrong to conclude from the Selective Service rejection figures that we are a nation of weaklings. Our enemies labored under that delusion, and they are learning their error the hard way. On the other hand, it is evident that we have no reason to be smug or complacent about the state of our people's health. We must ask, "What do these figures mean?" and then, "What must we do about it?"

It is clear that the figures do not reflect discredit on the men themselves. The great majority of them are the victims, not the villains, of the situation. Nor do the figures mean that the rejectees are unfit for participation in the war effort; in most cases they are serving honorably in war production or in some other necessary civilian activity.

The large number of rejections does mean that the manpower problems of the Army and Navy have been much more serious than they would have been had the Nation's health been better. The unavailability of the rejected men means that it was necessary to call into military service hundreds of thousands of other men better fitted for essential civilian tasks and more deeply committed to responsibilities in the society we fight to preserve—men with families, trained mechanics, skilled technicians, and teachers in scientific and technical schools.



If this situation was preventable—and we are profoundly convinced that it was—this Nation has an immediate duty to seek an immediate remedy.

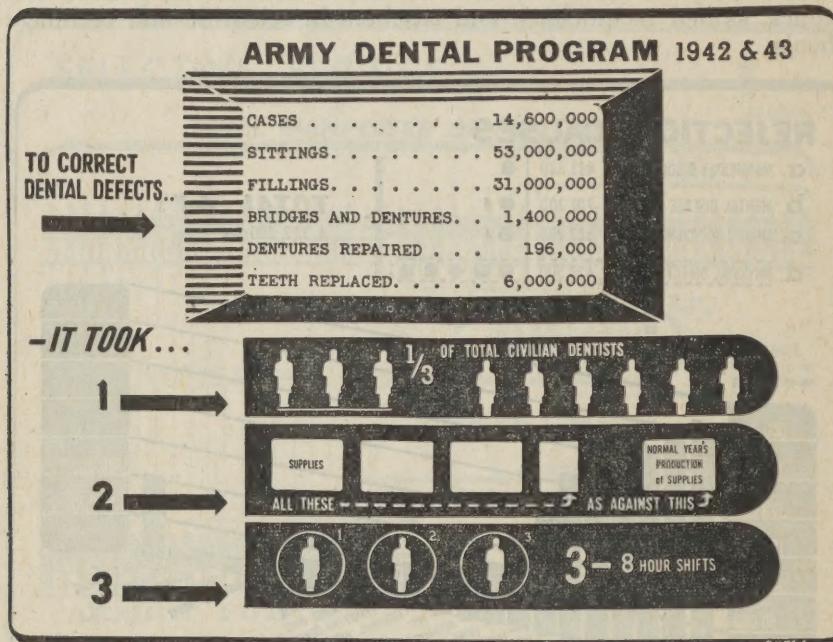
#### REHABILITATION OF REJECTEES

According to officials of the Selective Service System, at least one-sixth of the defects for which men were rejected could be remedied with relative ease, as far as medical science is concerned.

Early in the war, test rehabilitation programs were undertaken by the Selective Service System, but they yielded meager results and were abandoned. In sharp contrast to the results of the Selective Service efforts are those of the Army rehabilitation program. Here remarkable success has been achieved. Approximately 1½ million men with major defects have been inducted and rendered fit for duty, including 1,000,000 men with major dental defects, more than 250,000 with impaired vision, 100,000 with syphilis, and more than 7,000 with serious hernia. The success of this program demonstrates what can be done by vigorous and coordinated effort.

The magnitude of the Army's total dental program is apparent from the following figures: During 1942 and 1943, more than 14½

million cases<sup>1</sup> were treated, 31,000,000 fillings were provided, 6,000,000 teeth were replaced, and nearly 1½ million bridges and dentures were supplied. This work required 53,000,000 sittings by patients, and the production of three and one-half times the normal quantity of dental supplies and equipment produced in the United States in any one year.



We are told that registrants will continue to be called into service even after VE-day. Since the only physically fit men available will be the newly registered 18-year-olds, men with dependents, and those in essential occupations, wisdom and fairness demand that as many as possible of the registrants now in the IV-F classification be made fit for service. The subcommittee therefore recommends that the Army continue and, if feasible, expand its rehabilitation program.

Another opportunity for better rehabilitation service is presented by the Barden-La Follette Act (Public Law 113, 78th Cong.). This act recently made Federal funds available to State rehabilitation agencies for medical correction of defects hindering employment. Some IV-F's have already been referred by selective-service boards to State vocational rehabilitation agencies and have had their defects corrected. The immediate possibilities of this mechanism are somewhat limited because initiative is in the hands of the individual States, many of which have not yet developed the medical phase of their rehabilitation programs. Nevertheless, if the opportunities offered by the Barden-La Follette Act program were more widely known and utilized, more substantial progress could be made in the rehabilitation of rejected men.

<sup>1</sup> The word "cases" as used here does not refer to individuals; an individual may have been recorded more than once as a 'case' for separate treatments at the same or different Army posts.

## HEALTH OF THE REST OF THE POPULATION

According to the National Health Survey, conducted by the United States Public Health Service in 1935, more than 23,000,000 people in the country had a chronic disease or a physical impairment. In the working-age group (15-64), more than 3,000,000 people had impairments such as deafness, blindness, or orthopedic handicaps, and more than a million were estimated to have hernia.

A Farm Security Administration study of 11,495 individuals in 2,480 farm families residing in 21 typical rural counties in 17 States in 1940 showed that 96 percent of those examined had significant physical defects. The average number of defects per person was 3½. Only 1 person out of each 100 examined was found to be "in prime physical condition."

Among nearly 150,000 young people examined by physicians for the National Youth Administration in 1941, 85 percent needed dental care, 20 percent needed eye refractions, 19 percent needed tonsillectomies, and 12 percent needed special diets. Approximately 1 youth in every 7 was in urgent need of some kind of medical or dental treatment. About one-third of the young people had health defects which limited their employability. Only 10 out of each 100 examined had no defects for which the examiner made a recommendation.

High defect rates are not limited to low-income groups such as those studied by the Farm Security Administration and the National Youth Administration. The Life Extension Institute, in examinations of 300,000 insurance policyholders selected indiscriminately with regard to sex, age, and occupation, found that 59 percent were so physically impaired as to need the services of a physician at the time of examination.

Industrial casualties take a heavy toll. From Pearl Harbor to January 1, 1944, 37,600 American workers were killed on the job—7,500 more than the military dead for the same period. More than 200,000 workers were permanently disabled and 4½ million were temporarily disabled.

## EFFECT OF ILLNESS ON WAR PRODUCTION

The profound influence of illness and disability on war production is illustrated by figures on work absences due to sickness and accidents. In 1943, the average male industrial worker lost 11.4 days and the average female industrial worker 13.3 days of work due to sickness and injury. By far the greater proportion of this loss—80 percent in the case of men and 90 percent in the case of women—was believed to be due to common ailments. Application of these figures to the number of employed male and female workers in the United States today indicates a loss of more than 600,000,000 man-days annually. This is about 47 times the amount of time lost through strikes and lock-outs of all kinds during 1943.

Intensive investigation and the testimony of many expert witnesses has convinced the subcommittee that a great deal of illness and disability could be avoided if the benefits of modern medical and public health science were made readily available in all sections of the country and to all persons regardless of economic status. In recent years, and especially since the outbreak of war, there has

been a great awakening of public interest in all matters pertaining to health. More than 10,000,000 men and women in the armed forces are now receiving the benefits of complete medical and hospital care. The advantages of such care will not be forgotten after the war. Considerable increase in the demand for medical care may therefore be expected in the post-war period, and we should plan immediately to meet this increased demand.

On the basis of the information it has gathered to date, the sub-committee is not prepared to formulate a complete national health program or to make detailed recommendations concerning all the health problems that remain unsolved. In this interim report, however, we shall make preliminary observations regarding certain basic subjects which require further study; we shall also make specific recommendations regarding provision of facilities and services which we believe to be prerequisites to better national health and physical fitness.

#### NEED FOR IMPROVED PREVENTIVE SERVICES AND FACILITIES

During the period 1900-1940, the death rate in the United States fell from 17.2 per 1,000 population to 10.8 per 1,000, a reduction of nearly 60 percent. Improvement has been most notable with respect to diseases which respond favorably to better sanitation and immunization procedures. The death rate from typhoid and paratyphoid fevers, for example, was reduced by 97 percent, from diarrhea and enteritis by 92 percent, and from diphtheria by 97 percent.

A major share of the credit for this remarkable progress belongs to the public health agencies of Federal, State, and local governments. The development of the preventive services furnished by these agencies, however, has been very uneven in different sections of the country. As recently as 1935, only 615 of the 3,070 counties in the United States had full-time local public-health agencies. By 1942, under the stimulus of Federal grants made available by the Social Security Act, the number of counties served by such agencies had approximately tripled. Today, however, about 40 percent of the counties of the United States still lack full-time local public-health service. Many of the existing health departments are inadequately financed and staffed. Minimum preventive services under the administration of full-time local public health departments staffed with qualified personnel should be provided in every community. To accomplish this, additional Federal financial aid would probably be necessary. If new and consolidated areas of local health administration were established, however, as suggested by the American Public Health Association, the total funds needed probably would not exceed greatly the present total of health department expenditures.

Complete geographic coverage by full-time local health departments would not be sufficient in itself, however, to enable us to take full advantage of the possibilities for further advances in the control of venereal infections, tuberculosis, malaria, and other preventable diseases. Funds are needed for expansion of health-department activities in these fields and many others, such as food and milk sanitation, industrial hygiene, maternal and child health, and health education.

## WATER SUPPLIES, SEWERAGE, AND RURAL SANITATION

The progress made in the control of filth- and water-borne diseases should not blind us to the fact that many communities lack adequate sanitary installations and that rural sanitation in many parts of the country is at a deplorably low level. According to the United States Public Health Service, nearly 5,000 communities need new water systems and approximately 6,500 need water extensions or improvements. New sewerage systems are needed in about 7,700 communities with a combined population of nearly 9,000,000. More than 10,000,000 additional people live in communities where sewer extensions are needed. There are more than 2,800 incorporated communities, with a total population exceeding 25,000,000, that do not have any form of sewage treatment. Approximately 5,250,000 rural homes need new or improved water supplies, and 5,000,000 need sanitary privies. More than 846,000 rural homes are without any toilet facilities whatsoever.

The importance of milk as a vehicle for transmission of disease is universally recognized. Although pasteurization can and does prevent the transmission of milk-borne disease, most of the milk used in smaller communities is still consumed raw. Pasteurization plants should be constructed in more than 400 small communities with an aggregate population of about 1,666,000.

In many instances, community facilities such as those mentioned above could be financed on a self-liquidating basis by local governments with the aid of technical assistance and long-term, low-interest loans from State and Federal Governments. In other cases, grants-in-aid would be needed to supplement local resources. Such loans and grants would pay high returns in better health for all the people and in civic improvement throughout the Nation. Moreover, the required projects would give substantial stimulus to industry and would help provide full employment after the war.

## IMPORTANCE OF CHILD HEALTH

Most of the witnesses who testified before the subcommittee emphasized the necessity of correcting physical defects early in the life of the child. The importance of this is illustrated clearly by a study conducted by the United States Public Health Service in Hagerstown, Md. The health of the school children in Hagerstown has been observed over a period of years, and careful records of the findings have been kept. Recently, the Selective Service medical records of the Hagerstown registrants were compared with the school health records obtained by examination of the same individuals during their childhood. The comparison showed that many of the defects for which registrants were rejected had been discovered as much as 15 years earlier while the registrants were students in high school and grade school, and that in the years intervening between the school health examination and the Selective Service examination many of the defects remained uncorrected and unimproved.

The Hagerstown story is a familiar one to many physicians who freely give their time and energy in annual examination of school children. Every physician who conducts such examinations knows the discouraging experience of seeing his recommendations for the correction of physical defects go unheeded. In many children the

same defects are noted year after year, and nothing is done about them. Obviously, more effective methods of following up the doctors' recommendations are needed. The opportunities for supervision and promotion of children's health in the school are so great that no effort should be spared to develop methods by which present neglect can be overcome. The Nation's and the Government's rightful concern in this matter is demonstrated by the unfitness of millions of young men in a time of national crisis, and the subcommittee plans to investigate the subject further.

#### MENTAL HYGIENE

The high rejection and discharge rates for so-called neuropsychiatric causes have focused Nation-wide attention on the prevalence of mental disorders and maladjustments. This subject will be dealt with in a separate report on the health needs of veterans. We wish to emphasize here only the following points:

There is no cause for special alarm at this time about the number of neuropsychiatric discharges. A high rate of rejection and discharge for neuropsychiatric causes could have been predicted. It has long been known that approximately two-thirds of the illness encountered in general medical practice is essentially neuropsychiatric in origin and that half of the patients in hospitals at any one time are there because of serious mental disorders. Indeed, one may safely predict that in any group of 15-year-olds 1 out of 22 will some day be committed to a mental institution. It is not surprising, therefore, that the Army and Navy have had to reject and discharge large numbers of men as unfit to cope with the unusual stresses and strains of military life.

The neuropsychiatric causes for rejection and discharge include various degrees of nervousness, emotional instability, personality disorders, and inadequacies. The great majority of men with these difficulties can adjust themselves satisfactorily to civilian life in the home, on the job, and in the community. As indicated by a recent study of the New York Committee on Mental Hygiene, however, many of the men will need professional psychiatric services to help them make the adjustment. At present, psychiatric clinics are altogether inadequate to meet the needs of the returning men, and considerable expansion of such clinical services should be undertaken, primarily as a preventive measure to guard against the aggravation of disorders which are now relatively minor. The acute shortage of trained psychiatric personnel makes it imperative that such expansion be accomplished within the framework of general community medical services rather than as a separate program for care of veterans. There are only 3,000 qualified psychiatrists in the country—too few to permit separate mental hygiene services for different segments of the population. Medical schools could help by arranging their curricula so that the general medical practitioner, who must see most of the patients with psychoneuroses, would have a better knowledge of psychiatric problems and techniques.

From a longer range point of view, the establishment of child-guidance clinics in all communities is urgently needed to prevent early social maladjustments. Such a step would pay tremendous dividends

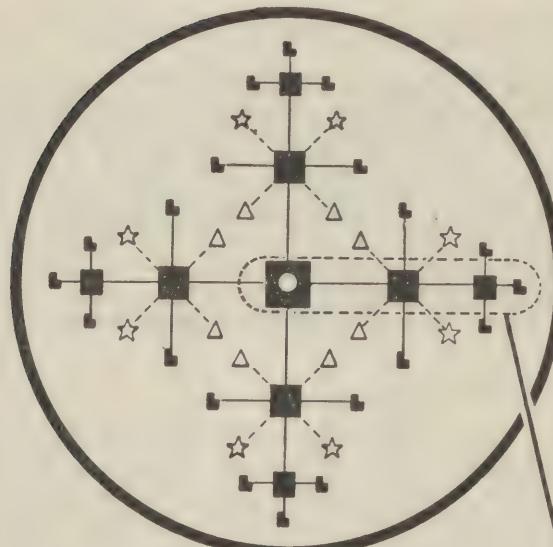
in decreased crime, delinquency, and costs of institutionalizing the mentally ill.

Finally, attention must be drawn to a factor which is beyond the control of medical science. Many expert witnesses emphasize that full employment and adequate social security are indispensable to a truly effective health program. This is especially so in regard to mental health. There is nothing so detrimental to a person's morale and self-confidence as idleness and the feeling that he has no useful place in the scheme of things. It may be too much to say that idleness causes mental or physical disease, but it provides fertile ground for development of fears, anxieties, and a sense of insecurity. These factors are known to have a profound effect on man's resistance to disease.

#### MEDICAL EDUCATION

Certainly, from the point of view of future needs, there should be no reduction in the present output of trained medical personnel. According to the American Medical Association, curtailment of this output is threatened by current Selective Service policies. Because of the urgent need of the armed forces for young men, the Selective Service System has deemed it impractical to continue occupational deferment of premedical and predental students. For the same reason, the Army Specialized Training Program for premedical and predental students has been drastically curtailed. The American Medical Association estimates that enrollment of medical students may fall as much as 50 percent beginning in 1945. If this proves to be the case, there would be only 2,500 medical graduates in 1948, about half the usual number and considerably less than the number of physicians who die annually. All expert opinion, however, is not so pessimistic. The chairman of the executive council of the Association of American Medical Colleges has informed the subcommittee that medical-school administrators are not alarmed about the situation, that classes are full for 1944, and that little apprehension is felt concerning the 1945 class. Further study of the facts is apparently necessary.

If there is actually a threatened shortage, it would seem that there must be in the United States the few thousand persons of the age, caliber, and training needed to raise annual premedical and medical school enrollments to the number required for the duration of the war emergency. It is true that an effort would have to be made to find students. Many war veterans and young men rejected for military service because of physical defects do not know of the great need for doctors or of the opportunities present in the study of medicine. Moreover, certain barriers and prejudices which limit enrollments could be removed. The financial barriers which face many prospective students could be overcome by more adequate scholarships or by loan funds. Some qualified students cannot gain admission to medical schools because of tacit racial or religious discrimination. Lastly, there is a great untapped source of future doctors among the women of the Nation. We are unable to discover any compelling reason for the failure of this country to utilize its womanpower to prevent what is claimed to be a serious future shortage of physicians. Other nations have done so; we have simply never tried.



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 COMMUNICABLE DISEASES  
 TUBERCULOSIS  
 VENEREAL DISEASE  
 OTHER  
 TEACHING  
 NURSES  
 INTERNS  
 RESIDENTS  
 POST GRADUATES  
 LABORATORY  
 X-RAY  
 PATHOLOGY  
 BACTERIOLOGY  
 CHEMICAL  
 PHYSIOTHERAPY  
 DENTISTRY  
 EYE, EAR, NOSE, THROAT  
 DIETETICS

### BASE



### DISTRICT

MAJOR SURGERY  
 OBSTETRICS  
 INTERNAL MEDICINE  
 COMMUNICABLE DISEASE  
 TUBERCULOSIS  
 VENEREAL DISEASE  
 OTHER  
 PEDIATRICS  
 EYE, EAR, NOSE, THROAT  
 DENTISTRY  
 PHYSIOTHERAPY  
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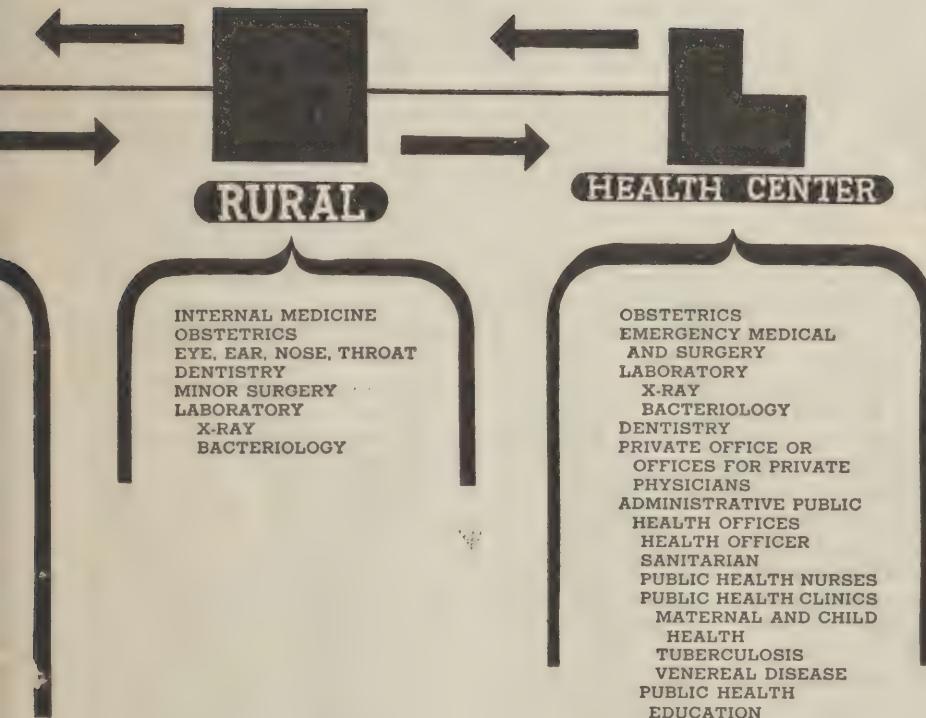
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 HOSPITALS OF INFORMATION, TRAINING, AND CON-  
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## TRAINING FOR DEMOBILIZED PHYSICIANS

The quality of medical education in this country for the past two decades has been very high. The medical schools have rendered outstanding service in the war by increasing the annual output of physicians 30 percent despite serious depletion of faculties and unpredictable Army and Navy policies. But the accelerated undergraduate courses, and the shortened internships and residencies, will make it necessary to provide further supervised training for many recent graduates unless the future quality of medical and dental practice is to be jeopardized. Most of the young graduates are well aware of this. A majority of the replies to a questionnaire recently addressed to medical officers of the Army and Navy indicated a desire for refresher and advanced courses in medicine after the war. Many thousands of physician veterans will receive post-graduate training at Government expense under the terms of the G. I. bill of rights. Neither the need nor the demand for post-war advanced medical training can be met with the graduate teaching facilities and staffs now available in medical schools. Expansion of such facilities through increased provision of teaching hospitals and medical centers, as part of the program hereinafter described and recommended, will therefore be required.

## DISTRIBUTION OF MEDICAL FACILITIES

The quality of American medicine at its best is very high. Unfortunately, American medicine at its best reaches only a relatively small part of the population. One of the greatest benefits of modern, scientific medicine is the early detection of conditions which, if neglected, may become seriously incapacitating or even fatal. Vast improvement is needed in the application of known diagnostic procedures. Only a negligible proportion of people get a periodic physical check-up. Fifty-five percent of all cases of tuberculosis admitted to sanatoria are in an advanced stage of the disease at the time of first admission. Many patients have cancer for months, or even years, before the disease is discovered, and a substantial number of cases remain undiagnosed until cancer has caused death. There is widespread neglect of prenatal care by which both maternal and infant death rates could be considerably reduced.

The reasons for the failure of medicine to apply more widely the known diagnostic and preventive techniques are many and complex. One very important reason is the lack of physical facilities and equipment in many parts of the country. Good medical practice today requires a concentration of skilled personnel and equipment that is found only in good hospitals, medical centers, or group clinics.

Whereas the national ratio of general hospital beds was 3.4 per 1,000 population in the years just before the war, the ratios in such States as Mississippi and Alabama were less than half that. According to the Surgeon General of the United States Public Health Service, 40 percent of our counties, with an aggregate population of more than 15,000,000, have no registered hospitals. Many of the counties with hospitals have poor ones, even though they are registered.

A study conducted by the American Medical Association showed that only 2 percent of the population did not reside within 30 miles of some hospital, but this does not indicate the quality of the institutions, whether or not they have vacant beds, whether or not patients

are financially able to use them, or whether racial barriers or legal requirements concerning residence prevent their utilization by all who live in the vicinity.

#### DISTRIBUTION OF PHYSICIANS

Shortages of doctors, dentists, nurses, and other medical personnel are marked in many communities, and, in general, medical personnel are inequably distributed throughout the country. For example, in 1944 Massachusetts had about 3 times as many active physicians in proportion to population as did South Carolina. Similar disproportions exist between other States and between local areas within the same State. Counties with more than 5,000 population may be without a single physician, while other counties in the same State may have 1 active physician for each 1,000 people.

Extensive studies conducted by the United States Public Health Service show that the distribution of physicians is influenced by several interrelated factors, among which are community purchasing power, adequacy of hospital facilities, degree of urbanization, proximity to medical schools and teaching hospitals, and presence of professional colleagues. Of these factors, the first three are probably the most significant, and community wealth is probably the most important of all. In 1938, counties with per capita income of more than \$600 had 8 times as great a proportion of physicians to population as did counties with per capita income of less than \$100.

Rural areas are generally less well supplied with physicians than urban areas. Strictly rural counties in 1938 had only about one-third as many physicians in proportion to population as did urban counties. Recent data supplied by the Procurement and Assignment Service show that the 81 counties reported to have no active physician, as well as the 141 counties reported to have more than 5,000 inhabitants per active physician, were practically all rural. The wealthier rural areas are better supplied than are the poorer rural areas, but even the wealthiest group of rural counties in 1938 had 30 percent fewer physicians in proportion to population than urban areas with the same per capita income.

The shortage of physicians in rural communities is not due to less need for medical care than in cities. Studies made by the Farm Security Administration suggest that the burden of illness in rural areas is the same as, or greater than, in urban centers.

#### SITUATION GROWS STEADILY WORSE IN RURAL AREAS

Despite this need, medical graduates have shown increasing reluctance in recent decades to settle in rural communities. In North Carolina, for example, the number of doctors in strictly rural areas fell from 1,125 in 1914 to 719 in 1940. In that year 73 percent of the population of the State lived in rural areas, although such areas contained only 31 percent of the State's physicians. The burden of caring for rural patients falls increasingly on the older practitioners who, despite sometimes heroic efforts, are frequently unable to do the work demanded of them.

There is no doubt that lack of hospitals and diagnostic facilities is one of the most important factors in keeping doctors away from rural practice. In fact, the presence of hospital facilities alone, inde-

pendently of such factors as community wealth and size of population, appears to attract physicians. This is suggested by a United States Public Health Service study which shows that among counties with per capita income of less than \$300, those with no general hospital beds had 60 percent fewer doctors in proportion to population than did those with 250 or more general hospital beds.

Many crowded war-industry and extra-cantonment communities are also suffering from a severe shortage of doctors. In some places shortages have been relieved by relocation of physicians through the Procurement and Assignment Service of the War Manpower Commission, but in others the situation remains critical and without hope of relief except through assignment of Public Health Service physicians, a proposal which Congress has rejected. Data submitted by the Procurement and Assignment Service show that at the end of 1943, 553 counties had more than 3,000, 141 counties had more than 5,000, and 20 counties had more than 10,000 people per active physician in private practice. In addition, 81 counties, 30 of which had populations of more than 3,000, had no practicing physician.

The wartime shortages are merely sharper manifestations of the long-standing and steadily growing maldistribution described above. There is every indication that maldistribution will become even more marked after the war unless effective steps are taken to reverse the trend. As the older physicians who remain in rural communities die or retire the situation becomes increasingly critical. Polls of the opinions of young Army and Navy doctors show that the vast majority want specialist training and practise, preferably with a group. Only 12% percent indicated a desire for rural practice. We may therefore expect the younger doctors and dentists to continue to shun the countryside unless they are offered good professional surroundings, including modern hospital facilities and an opportunity to earn a good living. Without such positive incentives the opportunity for better distribution presented by release of medical personnel from the armed services will be lost. More uniform licensure laws are also needed.

#### THE MEDICAL CENTER IDEA

Hospitals were formerly considered only as places in which to care for the seriously ill, and even today many hospitals are nothing more than that. Modern programs of hospital construction should have as their aim the ample provision of a more inclusive type of hospital service. The subcommittee has studied with interest the growing trend toward utilization of a relatively new type of facility called a medical center, which combines and coordinates the three major aspects of modern medical care—the preventive, the diagnostic, and the therapeutic services. The medical center brings together doctors' offices, diagnostic and laboratory equipment, hospital beds, and preventive work. It furthers group practice by physicians, surgeons, and dentists; encourages experimentation and research; and stimulates dissemination and exchange of medical knowledge.

This principle of combining the preventive, diagnostic, and curative services of medicine into a single functional unit, here called the medical center, has been advantageously applied on a large scale in certain great university centers. It is also applicable, however, to the smaller-scale needs of rural communities throughout the Nation.

The establishment of a network of "outpost clinics," to use the phrase of a representative of the American Medical Association, the creation of "diagnostic centers," as urged by the Surgeon General of the Navy, and the "expansion of the present functions of the hospital," advocated by the spokesman of the American Hospital Association, appear to be expressions of the same basic aim—the provision of facilities suited to the practice of modern, scientific medicine.

#### PLANNED NETWORK OF FACILITIES URGED

Terminology in this field is far from uniform. The Surgeon General of the United States Public Health Service urged development of a coordinated network of four basic types of medical center facilities—the small neighborhood or community "health center," the "rural hospital," the "district hospital," and the large "base hospital." (See cut on pp. 10-11.)

The physical structures required for many of these four basic types of units already exist in many areas. Here the primary need is for regional planning and organization of the existing facilities so that they might function in a coordinated manner, rather than for the construction of new buildings. In some places, minor alterations, renovations, or addition of new wings, might suffice to convert existing public or voluntary institutions into units of the coordinated regional plan.

The smallest unit, the health center, might include offices for local physicians and dentists; facilities for emergency medical and surgical work; a small number of beds for obstetrical care; laboratory facilities for X-ray, blood, and bacteriological procedures; and health department offices and clinics where these are not otherwise provided.

The rural hospital, located within easy reach of several health centers, would be larger than the health center and would provide additional basic medical, surgical, obstetrical, and laboratory services. The size of the rural hospital would depend upon the needs of the area it served, but it should be a modern hospital in every sense of the word.

Many of the health centers and rural hospitals probably would serve areas which could not support specialists' services of their own. Therefore, such services would be provided through district hospitals, located so that they could conveniently serve several rural hospitals. Local needs and preferences might determine whether patients from the rural areas were transported to the district hospitals or whether the specialists from these hospitals visited the smaller units periodically. In most instances the district hospitals would provide nurse training and instruction for interns, including discussion of complex cases and of medical advances.

#### BASE HOSPITALS

Finally, as the hub of each major medical service area, there would be a large base hospital. In most cases the major service area would be a State, though some States might have more than one major service area, and in some instances a base hospital might serve two States or sections of two States. The base hospital would be a teaching hospital, staffed with experts in every medical and surgical special-

ty, equipped for complete diagnostic services, and designed to conduct extensive postgraduate work and research. Besides its general hospitals beds, it would have, either on its premises or nearby, facilities for institutional care and study of tuberculosis, nervous and mental disease, contagious disease, and orthopedic and chronic disease. The benefits of the research carried on in the base hospital would be passed on to the smaller units in the network, and there would be constant back-and-forth referral of patients and diagnostic information, as well as interchange of personnel, between the large center and the smaller institutions.

With such graded networks—the health center, the rural hospital, the district hospital, and the base hospital—covering the entire country, facilities would be available through which every person, regardless of where he lived, might receive (a) immediate diagnosis and care for the common, relatively simple ailments and (b) easy access when necessary to the more complicated types of medical service.

The development of such a network of medical centers would constitute a great step toward the goal of providing a high quality of medical service everywhere in the Nation. It would enable communities to cope much more adequately with the medical needs of war veterans and their families. It would also create opportunities for group and individual practice for the 40,000 medical and dental officers who will return from the armed forces, as well as for returning nurses and other health personnel.

#### HEALTH DEPARTMENT CENTERS

Local health departments should be moved from the musty basements of county courthouses and city halls to modern, well-equipped buildings where the health officer and his staff could efficiently carry on their very important activities.

The American Public Health Association has proposed the creation of approximately 1,200 public health districts of roughly 50,000 population each, with at least one district health center and one sub-center in each district. These health department centers could in many instances be included in the medical center type of facility described above.

With improved facilities the health departments could undertake expanded public health programs designed to eradicate venereal disease, tuberculosis, malaria, and hookworm; to lower maternal and infant mortality; and to promote health through education. Cooperation would be fostered between the health department and local private practitioners, and both would benefit by a more comprehensive approach to the health problems of the people.

#### ACHIEVING A HEALTH FACILITIES PROGRAM

According to careful estimates made by the United States Public Health Service, facilities are needed for 100,000 new general hospital beds, 94,000 new nervous and mental hospital beds, and 44,000 tuberculosis beds. In addition, 66,000 general beds, 97,000 nervous and mental disease beds, and 16,000 tuberculosis beds are situated in hospitals that are obsolete and that should be replaced. Approx-

mately 2,400 modern structures are needed to serve as headquarters for local health departments.

A program for construction of these facilities would have to be well-planned and well-coordinated, in order to avoid the mistakes which characterized the construction boom following World War I. Areas which need hospitals most should be given priorities for building materials and surplus medical supplies. The hospitals should not only be planned and built along modern, functional lines, but should be staffed and maintained so as to assure a high level of operating efficiency. Voluntary and public hospitals should work together in a coordinated manner. Both, in turn, should cooperate with the health department and private practitioners.

The cost of an adequate health-facilities program cannot be borne by the States and localities alone. Federal grants-in-aid to the States on a basis of need will be necessary.

In order to permit local initiative and control, State programs should be drawn up by State health planning commissions in cooperation with local authorities. Such commissions, consisting of representatives of professional groups and the public, could be appointed by Governors in States where they do not now exist. In drawing up State plans the commissions should consider the needs of all sections of the State, should include in the plan all suitable existing public and voluntary hospitals, and should plot the new construction as well as the expansion or replacement of existing facilities needed for adequate service. Before Federal funds could be granted, however, over-all State plans and individual projects should be reviewed and approved by the United States Public Health Service to make sure that they meet certain minimum standards of construction, operation, and complete, coordinated service. There should be reasonable assurance that a new facility will have enough patients to justify its existence. In communities where sufficient income from fees of individual patients does not otherwise appear probable, provision for group prepayment plans or tax-supported services, or both, should be required.

Grants to both public and voluntary institutions included in the plan would be administered through a State agency, in most cases the State health department. To insure continued representation of the public, health advisory councils should be appointed to confer with the State agency administering the plan.

#### PAYMENT FOR MEDICAL CARE

Much has been said and written about the financial barriers to good medical care. There is general agreement that good medical care is necessarily expensive; that the burden of illness is unpredictable and falls unevenly, striking one family much harder than another; that sickness comes unexpectedly and may wipe out the laboriously acquired savings of an entire family; and that for these reasons a considerable part of the population does not receive either the amount or the quality of medical care it needs and should have.

In 1942 there were approximately 33.4 million family units in the United States. The following table shows their income distribution and the amounts they spent for medical care; also shown are the income distribution and the amounts spent for medical care by the 41.2 million "spending units," including individual consumers as well as family units:

*Income and medical care expenditures of 33½ million families and of 41 million spending units,<sup>1</sup> 1942*

Aggregate money income during 1942	Approximate number of families in each income group	Approximate number of spending units <sup>2</sup> in each income group	Percent- age of total families	Percent- age of total spending units	Average amount spent for medical care <sup>3</sup>		Proportion of total income spent for medical care	
					Families	Spending units	Families	Spending units
Less than \$1,000	6,900,000	10,100,000	21	24	\$42	\$35	6.8	5.7
\$1,000-\$2,000	9,800,000	12,600,000	29	31	68	62	4.5	4.2
\$2,000-\$3,000	6,800,000	7,900,000	20	19	96	94	3.9	3.9
\$3,000-\$5,000	6,700,000	7,300,000	20	18	143	141	3.7	3.7
More than \$5,000	3,200,000	3,300,000	10	8	241	241	2.4	2.4
<b>Total</b>	<b>33,400,000</b>	<b>41,200,000</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>90</b>	<b>3.6</b>	<b>5.0</b>

<sup>1</sup> Based on data from "Civilian Spending and Saving 1941 and 1942," Division of Research, Consumer Income and Demand Branch, Office of Price Administration (Mar. 1, 1943).

<sup>2</sup> The term "spending unit" includes individual consumers as well as families.

<sup>3</sup> Includes dental and nursing service.

The table indicates that even in the relatively prosperous year of 1942, 70 percent of the families in the United States had incomes of \$3,000 or less. The average family expenditure for medical care was estimated at \$100, but families with incomes under \$3,000 spent considerably less than this. Nevertheless, the low-income families spent a larger proportion of their income for medical care than the higher-income families.

#### CARE RECEIVED VARIES WITH INCOME

Other studies, particularly those of the Committee on the Costs of Medical Care, show that low-income families not only spend less for medical care but also receive much less care than those with higher incomes. The highest income group in 1929 received more than twice as much physician's care and more than three times as much dental care as did the lowest income group. Yet it is the low-income group that needs the most medical care. Sickness and poverty go together. In 1935 wage earners in families with incomes under \$1,000 per year suffered about twice as many days of disabling illness as did workers in families with incomes over \$3,000, according to the National Health Survey. Facts do not support the observation that "the poor and the rich receive the best of medical care; only the middle class suffers." High-quality care on a charity or low-cost basis is available to the poor in relatively few places. Even in those places, low-income families are often reluctant to accept charity.

In 1933 the Committee on the Costs of Medical Care estimated that adequate medical and dental care, with proper remuneration for those furnishing the service, could be provided at an average annual cost of about \$125 per family. Since this estimate was made, prices of medical goods and services have risen so that the figure would probably be about \$150 if it were brought up to date. Other authorities, however, place the average cost of providing adequate services at a much higher figure. It is evident from studies of family budgets that the 50 percent of our families with incomes under \$2,000 cannot afford to pay even \$150 a year for medical care and that this amount imposes hardship upon many families in the \$2,000 to \$3,000 income

group. The result is that doctors' bills pile up and many people will not call a doctor until they are seriously ill.

#### FEE-FOR-SERVICE VERSUS INSURANCE

Evidence such as this leads the subcommittee to conclude that the "pay-as-you-go" or fee-for-service system, which is now the predominant method of payment for medical services, is not well suited to the needs of most people or to the widest possible distribution of high-quality medical care. It tends to keep people away from the doctor until illness has reached a stage where treatment is likely to be prolonged and medical bills large. It deters patients from seeking services which are sometimes essential, such as specialist care, laboratory and X-ray examinations, and hospitalization. Individuals with low incomes, whose need is greatest, are most likely to postpone or forego diagnosis and treatment.

The solution of this problem will not be easy. Undoubtedly it lies in some form of group financing which would make it possible to share the risks and distribute the costs more evenly. This might be achieved by voluntary or compulsory health insurance, by use of general tax funds, or by a combination of these methods. Insurance methods alone would not be enough, because they are not applicable to the unemployed or to those in the lowest income groups.

In order to meet the requirements of the public and of the professional groups concerned, any method which is evolved should offer complete medical care, should be reasonable but not "cut rate" in cost, should include substantially all of the people, should afford the highest quality of care, should permit free choice of physician or group of physicians, should allow democratic participation in policy making by consumers and producers of the service, should be adaptable to local conditions and needs, and should provide for continuous experimentation and improvement. Insofar as possible, it should also avoid the charity relationship.

#### VOLUNTARY VERSUS COMPULSORY INSURANCE

The way in which these aims can best be achieved is now the subject of considerable debate. Advocates of voluntary health insurance, such as the Blue Cross hospitalization and the medical society prepayment plans hold that such plans will fulfill all needs if given sufficient time, and if supplemented by tax-supported grants for medical care to all recipients of public assistance. Others believe that only a small percentage of the population will ever obtain complete medical care through voluntary prepayment plans, and propose compulsory health insurance along some such lines as those set forth in the Wagner-Murray-Dingell bill (S. 1161, 78th Cong.). Still others maintain that needs would be met most satisfactorily and economically through a universal system of tax-supported medicine. At this stage of its investigation, the subcommittee is not prepared to pass judgment on these differing opinions. It is in agreement, however, with those who feel that remediable action is overdue and should not be long delayed.

Pending the achievement of a solution which will assure complete medical, dental, and hospital care for the whole population, more

adequate provision should be made for medical care of the needy. This will require increased appropriations by local, State, and Federal governments. Under the Social Security Act, Federal funds are granted to State programs for aid to the needy aged, the needy blind, and needy dependent children. Federal funds can be used for medical care of individuals in these categories if the State law so provides, but in most States medical care is not included among public-assistance benefits. Furthermore, Federal funds are not available to State programs for aid to needy individuals other than the aged, the blind, and dependent children. Legislation introduced in the 78th Congress provided for amendment of the Social Security Act so that Federal and State funds would be available to help States finance medical care for the needy, regardless of category. Proposals have also been made to alter allotment procedures governing distribution of Federal funds to State public-assistance programs so that more money could be given to States where needs are greatest. These measures, if approved, would help relieve the financial load on hospitals and practitioners, who now give a great deal of free care. Such relief for hospitals and physicians would permit them to lower their charges to prepayment plans and thus encourage the enrollment of more people from the group able to bear the average cost of medical care.

#### MEDICAL RESEARCH

Magnificent progress has been made in medical research during the war. The curative powers of penicillin and of the sulfa drugs, the life-saving value of blood plasma and serum albumin, the efficacy of D. D. T. powder and typhus vaccine, and the development of new malaria-control methods are all fruits of a concentration and expansion of medical research resulting from determination to win the war. Adequate financing, coordination, and teamwork have been the keys to this success. Through governmental agencies such as the Army, Navy, and the Office of Scientific Research and Development, and non-governmental agencies such as the National Research Council, the universities, and other groups, the Nation's resources for research have been mobilized in a vast cooperative effort.

With victory in sight, we now approach the challenges of peace. Many problems await solution. Much long-term as well as short-term or "practical" research into the causes and cures of cancer, arteriosclerosis (hardening of the arteries), hypertension (high blood pressure), dental decay, and nervous and mental disorders must be undertaken in order to assure further progress against disease.

The Office of Scientific Research and Development has served well as an emergency agency through which to channel Federal aid for medical research. Federal aid must continue if the great possibilities offered by medical research are to be realized. The way in which Federal aid is to be given and administered must now be carefully considered.

Government cannot, and must not, take the place of philanthropy and industry in the sponsorship of research. It is essential, however, for the Federal Government to provide resources for coordinated attack on medical problems which affect the country as a whole. In no other way can science be given full freedom and opportunity to serve the Nation in peace as it has in war.

## EDUCATION, LEGISLATION, AND ORGANIZATION

The subcommittee recognizes the complexity of the task of providing good medical care to all the people. We believe that there are three necessary methods of approach to this task. One approach without the others would be unrealistic and ineffective.

¶ The first involves education of the people, of the professions, and of the Government. We must collectively accept the fact of widespread existence of disease, disability, and injury, much of which medical knowledge today is able to prevent, alleviate, or cure.

The second approach is through legislation. There is urgent need for modern medical facilities in many places throughout the Nation, especially in rural areas and in crowded war-industry communities. To meet these needs money must be provided, and Federal financial assistance will be necessary.

The third approach is through better organization of medical services. There is wide agreement that improved organization would result not only in a higher quality of service but in considerable economy of time, effort, and money. The necessary reorganization can best be achieved, and the welfare of the professions and the public advanced, by regional planning such as that provided for in the health and medical center proposal set forth above.

## RECOMMENDATIONS

On the basis of the preliminary findings outlined above, the subcommittee—

1. Recommends that Federal grants-in-aid to States be authorized now to assist in post-war construction of hospitals, medical centers, and health centers, in accordance with integrated State plans approved by the United States Public Health Service. (See cut on pp. 10-11 and text on pp. 14-17.)

2. Recommends that Federal loans and grants be made available to assist in post-war provision of urban sewerage and water facilities, rural sanitation and water facilities, and milk pasteurization plants, in communities or areas where such facilities are lacking or inadequate.

3. Urges State and local governments to establish full-time local public health departments in all communities as soon as the needed personnel become available. With this aim in view, consideration should be given to rearrangement and consolidation of local health jurisdictions and to amalgamation of existing full- and part-time local health departments with overlapping functions. The Federal Government should increase the amount of its grants to State health departments to the end that complete geographic coverage by full-time local health departments may be achieved and that State and local public health programs may be expanded in accordance with needs.

4. Recommends that the Army consider the feasibility and advisability of expanding its program for induction and rehabilitation of men rejected because of physical and mental defects.

5. Recommends that the medical records of the Selective Service System be preserved and that funds be appropriated for further processing and study of these records.

6. Reports the acute shortage of personnel with training in psychology and psychiatry and the need for immediate steps to increase the output of such personnel with a view to providing child-guidance and mental hygiene clinics on a far wider scale.

7. Recommends that Federal scholarships or loans be made available to assist qualified students desiring medical or dental education; urges that increased enrollment of women in medical and dental schools, and premedical and predental courses, be encouraged in every way possible.

8. Recommends that Federal funds be made available to States for medical care of all recipients of public assistance and that allotment formulas governing distribution of Federal funds to State public assistance programs be made more flexible in order to give more aid to States where needs are greatest.

The recommendations made above should be put into effect as soon as possible. We should begin planning now for the reconversion period. Further delay will postpone orderly solution of our health problems and deprive us of an effective means of aiding industry to maintain full production and employment after the war.

A comprehensive health- and medical-facilities program, planned now and undertaken as soon as materials and labor become available, would soon pay big dividends in improved national health and physical fitness. We have seen what neglect of opportunities for better health has cost us during this war. We should resolve now that never again, either in war or in peace, will the Nation be similarly handicapped.

JANUARY 2, 1945

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